USSN: 10/527,771

Attorney Docket: I-2002.015 US

Response to Final Office Action of November 15, 2006

## Amendments to the Specification

Please replace the paragraph at page 10, lines 4-27 with the following paragraph:

A very attractive expression system for heterologous nematode gene expression is a nematodal expression system based upon the worm Caenorrhabditis elegans. A heterologous expression system for this nematode has been described by Redmond, D. L. et al., in Molecular and Biochemical Parasitology 112,125-131 (2001). See also Hashmi, S. et al., in Trends in Parasitology 17, 387-393 (2001). The genes according to the present invention can be fused immediately downstream of a C. elegans cystein protease promoter, cpr-5, which has been shown recently to direct expression to the gut of C. elegans (Redmond et al., 2001) and cloned into the pGEX-vector. The slow growing DR96 unc76(e911) C. elegans mutant strain can be transformed by micro-injection of plasmid DNA into the distal arm of the hermaphrodite gonad. The plasmid DNA can e.g. be prepared using the Qiagen method. Ostertagia genes according to the invention can be co-injected with the repair plasmid p76-16B. The p76-16B plasmid rescues the unc76 phenotype and allows transformants to be identified through reversion back to the wild type phenotype. Transformed lines in which the second and subsequent generations show the wild type phenotype will be maintained. The presence of the injected construct in transgenic worms can easily be verified by PCR analysis of single worms with primers developed specifically for the DNA of interest (Kwa et al., Journal of Molecular Biology 246, 500-510. (1995)). Transgenic worms, rescued by p76-16B, grow more quickly than the unc76(e911) mutants and allow rapid accumulation of transgenic worm material. Because of its rapid life-cycle, transformants can be grown in vitro in large quantities. Somatic extracts of transgenic worms can be prepared by grinding the nematodes in a mortar under liquid nitrogen and resuspending them in 0.05M PBS containing 2% TRITONX-100® non-ionic polyethylene glycol octylphenyl ether detergent. Fusion proteins will be purified by affinity chromatography using a Glutathione Sepharose column.

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Please replace the paragraph on page 26, lines 15-25 with the following paragraph:

Total RNA of L<sub>3</sub>, L<sub>4</sub> and Adult parasites was prepared using TRIZOL® Reagent (phenol solution available from GibcoBRL, Life Technologies). PolyA<sup>+</sup> RNA was purified using mRNA Separator® Kit (Clontech Laboratories, Inc.). Three μg of mRNA was converted into first strand cDNA with random hexamer primers (SuperScript® Choice System for cDNA Synthesis, GibcoBRL, Life Technologies). Double stranded cDNA was modified with EcoRI-NotI adapters and cloned into the lambda gt11 vector (Stratagene). Recombinant lambda phages were packaged (Gigapack®III Gold Packaging Extract, Stratagene) and the packaging reaction was titrated. The L<sub>3</sub> cDNA library was estimated to contain 1.15x10<sup>6</sup> independent clones; the L<sub>4</sub> cDNA library 9.6x10<sup>6</sup> and the Adult cDNA library contained 3.41x10<sup>8</sup> plaque forming units. Upon amplification these cDNA libraries were immunoscreened with the anti-ES rabbit sera.

Please replace the paragraph on page 39, lines 4-15 with the following paragraph:

The coding regions for the 65, 28, 31, and 24 kD proteins of the invention were subcloned from their respective vectors into a pFastBac® plasmid (Invitrogen) using standard techniques. These FastBac constructs were transfected into Sf9 insect cells, to produce recombinant baculoviruses, according to the manufacturer's instructions (Invitrogen). Next expression cultures were run, using Sf9 and Sf158 insect cells, which were cultured in microcarrier spinner flasks of 100 and 250 ml. Serum free culture media used were CCM3<sup>TM</sup> (Hyclone), and SF900-II <sup>TM</sup> (Invitrogen). Cells were infected at an m.o.i. of 0.1-0.5 and cultured for 34 days. Then cultures were centrifuged, culture supernatant was harvested, and cell pellets were resuspended 10 x concentrated in PBS. TRITONX-100® non-ionic polyethylene glycol octylphenyl ether detergent was added to all samples to a concentration of 0.2% v/v. Samples were extracted overnight at room temperature, centrifuged, and supernatants were stored at -20°C. until use.